NEPSS

Marine Environmental Update

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Status Report on Offshore Study

The framework for conducting the offshore ecological risk assessment at Naval Shipyard Portsmouth was presented to the shipyard Technical Review Committee (TRC) during the November 17, 1992 TRC meeting. The offshore ecological risk assessment framework consists of relating data and information on stressors (sources of impact to the Great Bay Estuary, including the solid waste management units located at the shipyard, as well as other sources of pollution in the estuary) to the effects on water and sediment quality, aquatic organisms, and natural resources in the estuary. The framework provides a mechanism for incorporating scientific and technical data to meet the requirements of the shipyard's hazardous waste permit, in accordance with the Environmental Protection Agency and State of Maine environmental regulations, Navy policy, and public concerns.

"Simply stated, an ecological risk assessment consists of determining what decisions must be made, identifying the data and information needed to make the decisions, and providing the measurements necessary to make the correct decisions," explained Robert Johnston, a marine scientist from the Naval Command, Control and Ocean Surveillance Center Research, Development, Test and Evaluation Division (NCCOSC RDTE DIV), who is coordinating the offshore study. The offshore study is a cooperative effort between NCCOSC RDTE DIV, the EPA Environmental Research Laboratory Narragansett, and the University of New Hampshire (UNH).

The offshore study has identified important ecological resources in the lower estuary that are being monitored to determine any long term impacts resulting from past waste disposal practices at the shipyard. Preliminary results show that contamination levels in Portsmouth Harbor are relatively low, and that lobsters and flounder contain only low amounts of contamination. However, indications of ecological stress have been measured at various locations in the lower estuary. These results, and how they will be applied to determine appropriate corrective actions for the shipyard, are being evaluated.

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As part of the offshore study an historical overview of the ecology of the Great Bay Estuary has been prepared by UNH. The report entitled *The Ecology of the Great Bay Estuary, New Hampshire and Maine: An Estuarine Profile and Bibliography* was prepared for reading by concerned citizens, monitoring groups, government agencies, and researchers involved in estuarine research. The estuarine profile contains detailed information on the history, ecology, natural resources, pollution, and management issues of the Great Bay Estuary. The estuarine profile is available to the public and copies can be obtained by sending $10.00 to:

The Great Bay National Estuarine Research Reserve
New Hampshire Fish and Game
37 Concord Road
Durham, NH 03824

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Ecorisk Focus Turns to Ecosystems

The Environmental Protection Agency announced that it is shifting its approach to Ecological Risk Assessments from effects on a single species to effects on an entire ecosystem. Originally, ecological risk was designed to test toxic effects of a chemical on a specific plant or animal. The results from the tests would then help EPA regulate pesticides and chemical usage. The agency is currently conducting a $3.5 million prototype study, according to the Environment Reporter. The work is focusing on broad range effects of a chemical on entire ecosystems including decomposition, and predation.

In keeping with the total ecosystem approach, the Environmental Sciences Division (Code 52) at the Naval Command, Control and Ocean Surveillance Center Research, Development, Test and Evaluation Division (NCCOSC RDTE DIV) has developed the Portable Microcosms for Environmental Testing (POMFRET) that provides a system which can be deployed at specific aquatic sites (e.g., Navy-used harbors) to evaluate the long-term effects of various pollutants on resident marine organisms. A motorized van provides portable laboratory/workshop space for field experiments. All the aquaria, aquarium stands, delivery pumps and system plumbing components are transported within the van. Operational POMFRET systems are capable of being assembled by two technicians in about five working days.

On-site experiments would typically run for one to six months. The system produces data on the effects (and uptake rates) of pollutants such as heavy metals, pesticides and hydrocarbons on typical shallow-water organisms that are either collected and introduced to the aquaria, or allowed to naturally colonize the tank environments. Oysters, crabs, microcrustaceans, polychaete worms, corals, anemones, small fish and complex invertebrate fouling communities are examples of target organisms that have been maintained in the prototype system during several long-term operational tests. For additional information, contact Jeff Grovhoug at:

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QA/QC Requirements for Ecological Risk Assessments

The data quality objectives for conducting ecological risk assessments require the use of field and laboratory methods that are capable of measuring parts-per-billion levels of organic and inorganic contaminants in sediments and organisms. No procedures capable of making these measurements have been officially approved by any regulatory agency, therefore, quality assurance/quality control (QA/QC) procedures are required that will assure

that scientifically-sound data are obtained. A framework has been developed by the Marine Environmental Support Office of the Naval Command, Control and Ocean Surveillance Center Research, Development, Test & Evaluation Division (NCCOSC RDTE DIV) for implementing performance-based protocols, criteria and corrective action for field and laboratory activities. This plan expands upon areas not addressed by the Environmental Protection Agency Contract Laboratory Program (CLP), and as such the procedures outlined should be viewed as additions and expansions to CLP protocols.

The recommended analytical methods and QA/QC procedures are identified in NCCOSC RDTE DIV Technical Document 2296. These procedures have been used to meet the data quality objectives for a variety of federal programs, including the NOAA National Status and Trends Program, the EPA Puget Sound Estuary Program and the US Navy CERCLA assessment for NCBC Davisville and RCRA assessment for Portsmouth Naval Shipyard. The procedures require participating laboratories to demonstrate proficiency through routine analysis of Standard Reference Materials (SRM) or Certified Reference Materials (CRM). The participating laboratory participates in on-going performance evaluation exercises throughout the study. Corrective actions will be required if performance falls below predetermined standards.

Each batch of environmental samples to be analyzed must contain a minimum number of QA/QC samples (SRM, CRM, laboratory control materials, blanks, calibrations standards, sample replicates, etc.). The plan also provides specific control limits or numerical data criteria which require specific corrective actions before analyses may be continued. In all other areas not explicitly addressed by the ecological risk QA/QC plan, standard EPA CLP protocols are to be applied. For more information, contact Robert Johnston at:

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Environmental Compliance Regulators Will Now Inspect Federal Facilities

The House and Senate approved the Federal Facilities Compliance Act of 1992 (HR 2194) on September 23, and it has been signed into law by President Bush. The law allows state and local regulatory agencies and the U.S. Environmental Protection Agency to enforce hazardous waste laws at federal facilities. In addition, federal sovereign immunity has been waived for enforcement actions taken by states or the EPA at federal facilities under the Resource Conservation and Recovery Act. The FFCA specifically allows for inspection of federal facilities for compliance with federal, state and local hazardous materials laws and regulations and provides for fines for any violations. Activities under regulation include improper marking of hazardous material (HAZMAT) containers (pallets, drums, barrels, bottles, jars, etc.), improper storage, improper waste, and all other HAZMAT concerns. Fines of $25,000 may be assessed per violation, per day, until corrected. All federal facilities can expect inspections from their local authorities soon, and should make compliance a high priority.

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Contaminated Military Sites Identified in San Diego Area

Investigators have identified 99 sites on 23 military installations in the San Diego area that are contaminated

and may require extensive clean-up or pollution monitoring. Time and cost estimates for a total restoration effort range up to 10 years and $1 billion. Underground water sources in San Diego County are threatened by fuel leaking from an estimated total of 3000 underground storage tanks. Of these, about 800 are located on military installations. Military sites considered to have the most serious problems include:

- **Camp Pendleton** - leaking fuel was discovered to have polluted ground water sources on the Marine Corps base and drinking-water wells are threatened with mercury contamination. The base has been placed on the Superfund list of national priorities by the Environmental Protection Agency.

- **Naval Air Station North Island** - 13 sites on the air station are being considered for remediation efforts where chemical cleaning wastes were drained into a landfill, PCB-laden oils were leaked from transformers, and hazardous chemicals stored in unlined earthen pits leaked into the ground water. It is expected that the Naval Air Station will soon be placed on the EPA Superfund list.

- **Naval Amphibious Base Coronado** - Hazardous wastes, including solvents, paint thinners, and other chemicals have been identified at dump sites on the base. A public beach is located within 200 feet of the base.

- **Naval Fleet and Industrial Supply Center Point Loma** - Dump sites have been identified contaminated with waste oil, and lead-contaminated sludge was used for dust control over an area of up to 100 acres.

- **Naval Base San Diego** - Solvents, fuels, and other hazardous wastes were disposed of in an industrial dump adjacent to Paleta Creek which empties into San Diego Bay. The creek was reportedly also used for cleaning equipment.

--*The San Diego Union-Tribune*, Sunday, November 29, 1992.

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Navy Employee Receives Prison Term for Fuel Spill

A Navy employee was found guilty of violating environmental pollution laws in connection with a 500,000-gallon jet fuel spill at Naval Air Station, Adak, Alaska. John Hoyt Curtis, former director of the Fuels Division on Adak Island, was sentenced to 10 months in prison for violating the Clean Water Act after the fuel contaminated an inlet of the Bering Sea. He was tried in federal court in Anchorage.

The Clean Water Act is a federal environmental statute that prohibits all discharges of pollutants into U.S. waters without a permit.

Curtis was charged with pumping the fuel through a pipeline he knew to be leaking. As a direct consequence of his action, thousands of gallons of fuel flowed from the pipeline into Sweeper Cove, an inlet of the Bering Sea.

"This conviction and sentence sends a clear message to employees of federal facilities and installations who are involved in environmentally sensitive work that their status as federal employees will not shield them from prosecution for criminal acts of pollution committed by them," said acting Assistant Attorney General Barry M. Hartman.

--Compiled from U.S. Navy and various media reports.

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Scaled-Down Clean Water Act Proposal Disclosed at Conference

A slimmed-down Clean Water Act reauthorization bill is slated to be introduced in the Senate in January 1993 according to Jimmie Powell, minority staff counsel

to the Senate Environment and Public Works Committee. At a conference on clean water and the economy, Powell told participants that the draft prepared for Senator John Chaffee (Republican-RI) addresses extensions of the state revolving loan fund program, permit fees, the non-point source pollution program, storm water discharge standards, and combined sewer overflow provisions. Minor wetlands protection provisions will also probably be included.

The three-day conference sponsored by the Environmental Protection Agency and Resources for the Future was attended by congressional staff members, environmentalists, industry representatives, and economists. The EPA assistant administrator for water, LaJuana Wilcher, maintained that the reauthorized Clean Water Act should include economic incentives for water pollution control. Major difficulties include the assigning of economic values to natural resources (e.g. ground water) and funding.

An aide to Representative Gerry Studds (Democrat-MA), acting chairman of the House Merchant Marine and Fisheries Subcommittee on Fisheries and Wildlife Conservation and the Environment, related plans to introduce legislation to establish a national clean water investment corporation. Proposed funding sources discussed included $2 billion per year from industrial facility waste water discharge fees, $1 billion per year from charges associated with the use of commercial pesticides and fertilizers, and $2 billion per year from various federal appropriations.

Under the proposed industrial waste water discharge fee system, each of 192 chemicals released to surface waters by direct and indirect dischargers would be placed within one of five possible categories: a baseline group and four others of increasing toxicity to human health and aquatic life. A penalty structure would be established for each of the five categories and applied to actual loadings, or discharges, of the individual chemical(s). The size of the fees that need to be applied in order to be effective were discussed without reaching a consensus. Zach Wiley, a senior economist with the Environmental Defense Fund, argued that imposing fees alone would be ineffective in modifying industry behavior, and recommended that they be used in conjunction with positive economic incentives.

--*Environment Reporter*, Vol. 23, No. 26.

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Contaminated Soils Under EPA Review; Variance Extended

Soils containing hazardous waste will be granted a variance from federal land disposal restrictions. The variance took effect on October 13, 1992, and will continue until May 8, 1993. In addition, the Environmental Protection Agency has the authority to extend it until May of 1994.

Several problems are being encountered when soils need to be treated as hazardous waste. A lack of treatment capacity and inadequate standards have forced EPA to consider the problem for another year. The associated problems with incineration of soils has forced EPA to consider other methods for treatment of hazardous waste. The alternative technologies include soil washing, thermal desorption, and biodegradation.

Currently, RCRA prohibits disposal of untreated hazardous waste unless it is stored at a facility where there will be no migration for as long as the waste remains hazardous. The extension applies to contaminated soils that were granted a variance from land disposal restrictions and whose best demonstrated available treatment (BDAT) is incineration, retorting, or vitrification. EPA said that it "believes that allowing cleanup projects to continue is more protective of the environment than allowing wastes to remain in the soil."

Additional information on the interim final rule is available from the RCRA hotline, telephone (800) 424-9346, or (703) 920-9810 in the Washington, D.C. area. Technical information also is available from Nicholas Vivvone, EPA office of Solid Waste, telephone (703) 308-8477.

--*Environment Reporter*, Vol. 23, No. 26.

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Recycled Oil Status Updated By EPA

Used oil that will be recycled or burned will not be classified as hazardous waste, according to the Environmental Protection Agency. The agency stated that used oil will not have to be listed as hazardous waste because current prescribed procedures ensure that human health and the environment are adequately protected. In addition, the rule meets RCRA section 3014 which states that EPA must "publish management standards for safely handling used oil and at the same time, not discourage recycling efforts."

The rule includes management standards for used oil generators, collection stations, processors and re-refiners, transporters, collectors, burners and marketers of used oil. Some additional regulations are established to help regulate maintenance, labeling, and storage requirements, including a used-oil storage limitation of 35 days at transfer facilities. Collection facilities such as service station dealers that comply with the standards set by EPA are not liable for emergency response costs or damages resulting from releases of used oil. Instead, the re-refiners, transporters and collectors will be responsible for the clean-up of any used oil spills to the environment, and for tracking incoming used oil and outgoing recycled used oil products.

Several organizations have challenged the EPA decision. The Sierra Club maintains that the rule "encourages the burning, not recycling, of used oil as a fuel in residential and industrial boilers." The department of Health and Human Services rates lead as the number one environmental threat to children in the United States. There is a large threat of lead poisoning from burning the oil. The Hazardous Waste Treatment Council attacked the rule stating that it does not fulfill the requirements of RCRA, which defines a waste as hazardous if it poses a threat when improperly managed. The EPA answers this charge by presuming that the waste will be properly managed.

--*Environment Reporter*, Vol. 23, No. 16.

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102nd Congress Leaves Wake of Unfinished Business

In the final days of the 102nd Congress, it became apparent that most legislation started regarding the environment would not be completed, leaving a pile of work for the 103rd Congress. The Resource Conservation and Recovery Act and Clean Water Act reauthorizations were deferred until the next session of Congress along with amendments to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Environmental legislation brought about many smaller decisions to ensure that the next Congress will run more smoothly.

One key issue passed was the appropriations bill signed by President Bush on October 6 which provided $6.89 billion for Environmental Protection Agency Programs for Fiscal Year 1993. Included in this was $1.57 billion for Superfund Site cleanup, and $323 million for research and development. In addition to the money allocated for the Superfund, the House Ways and Means Subcommittee on Oversight instructed the EPA that it must improve its program performance if it expects Congress to reauthorize the Superfund tax that is their source of funding.

Laws affecting federal facilities had a positive response within the Congress. The closure of bases has increased funding for environmental cleanup and compliance. It has become necessary to convert government land to private land as quickly as possible in order to help communities located around closing military bases. Most of the money is going to clean up hazardous and radioactive waste, however, about $430 million is going towards environmental compliance and ongoing operations. Enforcement regulations were briefly considered during a hearing on the environmental crimes bill which would toughen criminal sanctions. The bill was stalled in a Senate subcommittee and should be reintroduced in the next Congress. A major step toward dealing with radioactive waste was established when a bill to establish the Waste Isolation Pilot Plant (WIPP) in New Mexico was approved in the Senate by a voice vote.

In 1992, the Senate did ratify three separate international environmental treaties. The first was at the United Nations Convention on Climate Change, signed by President Bush. The treaty establishes that all industrialized nations will cut their emissions on greenhouse gas emissions. The treaty, however, has no deadlines for action for the reduction of emissions. Another treaty established the regulation of transport of hazardous waste internationally. Signatories agreed not to ship or receive hazardous waste across borders unless the recipient country gives consent. In addition, if there is any reason that the waste would not be managed in an environmentally sound way, it should be denied. The final international treaty that was signed was the Protocol on Environmental Protection to the Antarctica Treaty, which banned mining and drilling for at least 50 years and established cooperative research. The Congress also passed two bills that assist developing countries. The first provided for a Global Environment Facility which would be run by the world bank in order to help developing countries deal with environmental problems. The second, a "debt-for-nature" swap, allowed Latin American and other countries to swap debt to the United States in exchange for pledges to finance domestic environmental and developmental projects.

--*Environment Reporter*, Vol. 23, No. 26.

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Environmental Issues and Public Relations

Agencies within the public sector cannot hide from the public when it comes to environmental problems. In order to better manage potential problems, a knowledge of how to deal with the public and the press in a positive way is necessary. When public opinion has already been aligned against your organization (a situation that is best avoided), it takes good planning to maintain a positive image.

First, and foremost, keep your Commanding Officer (or Officer in Charge) and Public Affairs Officer informed and involved! Also, your Legal Officer should be able to help you determine any applicable requirements under Public Right to Know statutes.

The following tips to help create a positive image for your organization were compiled from the *Journal of Environmental Regulation, Volume I, Number 1,* and *Practical Guide to Environmental Management,* by Frank B. Friedman, Environmental Law Institute, 1991. Consult those volumes for further information in dealing with regulatory agencies. Contact your Public Affairs Officer for specific guidance in dealing with your particular environmental issues.

- Do not ignore the press, the assumption is already that you are hiding something or do not know enough information. Additionally, the press may tend to treat you with some cynicism in their reports if they are ignored, and the press can be unforgiving and interpret your original quotes out of context. To avoid having your

intentions and actions misinterpreted, maintain continuity throughout your own organization by making sure that everyone concerned understands and agrees on a position before it is released.

• Do not assume that you are speaking off the record. A briefing could be turned against you unless the press contact is reliable and honest; and being quoted out of context occurs often. In order to minimize this situation, do not use statements with qualifiers and be confident in your speech. Keep in mind that your words represent your organization. Overall, maintain control over who you have contact with. Decide on a reporter with a good reputation for complete and fair reporting skills. Investigate their past record if necessary; you can be sure that they have done the same for you.

• Acknowledging your responsibilities is necessary for your image and credibility. So is taking corrective action as quickly as possible. "Hazardous Wastes" are panic words for the public. There is no distinction between trace amounts and harmful quantities of hazardous pollutants, and your credibility is always being questioned. Additionally, citizen groups tend to focus on issues that will have large community support. Broad national issues combined with the ability to influence the public can give citizen action groups and some politicians their power at your expense. Deal with incidents before they occur.

• Maintain your image in the community in order to avoid "chemophobia." Check applicable Navy (NAVFAC) instructions on developing community relations plans. Encourage your employees to participate in local organizations so they become known as individuals and not just Navy personnel. Arrange for tours of your facilities and have base workers there to answer questions about operations. Focus on Navy experiences rather than on industry as a whole. The day a spill or release occurs is too late to get the public on your side, your public relations plans must be ready in advance.

In addition, realize that there will always be some people against you regardless of your effort. It may be impossible to convince everyone of your good intentions. Try to have an goal of being a responsible organization within the community by presenting the facts and giving the community a chance to become involved.

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Please forward comments or questions about this newsletter to:

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